

In the Claims:

Please cancel claim 22:

1 .(Previously Presented) A method of recovering precious metals from a mineral composition prior to separate cyanide leaching, the mineral composition comprising a refractory material, the method comprising

milling the composition to a particle size of P<sub>80</sub> of less than 25 microns and

leaching said composition at atmospheric pressure with a solution comprising lime and/or limestone in the presence of an oxygen containing gas, the leaching being initiated under alkaline conditions to form a leached material, and

subjecting the leached material to a cyanide leaching step to recover precious metals.

2.(Original) The method of claim 1, wherein the refractory material is selected from the group comprising an iron containing sulfide ore, a refinery slime, a carbonaceous ore, a selenide and a telluride.

3.(Original) The method of claim 1, wherein the refractory material is selected from the group consisting of pyrite, marcasite, arsenopyrite, troilite, pyrrhotite stibnite, tetrahedrite, argentopyrite, calaverite, altaite, gold bearing selenides, tennantite and pentlandite.

4. (Previously presented) The method of claim 3, wherein the refractory material is pyrite or arsenopyrite.

5. Cancelled

6. (Previously Presented) The method of claim 1, wherein the material is leached in an open tank reactor.

7.(Original) The method of claim 2, wherein the material is leached at a temperature of about 50°C up to about the boiling point of the solution.

8.(Previously Presented) The method of claim 1, wherein the oxygen containing gas is oxygen and the oxygen is introduced into the leaching solution to a level of between about 200 to about 1000kg/tonne of solids in the leaching solution.

9.(Original) The method of claim 8, wherein the oxygen is introduced into the leaching solution at a flow rate of between about 0.1 to about 0.5vvm.

10.(Original) The method of claim 1, wherein the particle size is between about 2 to about 25 microns.

11.(Original) The method of claim 1, wherein the particle size is between about 5 to about 15 microns.

12. Cancelled

13. Cancelled

14.(Previously Presented) The method of claim 1, wherein the leach solution comprises a mixture of lime and limestone and the wt% of limestone in the mixture is between about 40 to about 95%.

15.(Original) The method of claim 14, wherein the amount of lime and/or limestone added to the leach solution is between about 100 to about 1200kg/tonne of solids in the solution.

16.(Original) The method of claim 15, wherein the amount is about 800kg/tonne.

17.Cancelled

18. (Previously Presented) The method of claim 1, wherein the refractory material is a refractory sulfide material bearing gold, silver or platinum.

19. (Previously Presented) The method of claim 1, wherein the refractory material includes a carbonaceous fraction.

20. Cancelled

21. Cancelled

22. Cancelled

23. Cancelled

24. Cancelled

25. (Previously Presented) The method of claim 1, wherein the treated material is subjected to a thickening step prior to the separate cyanide leaching step to recover the precious metal.